Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	)	
	)	
Creation of a Low	)	MM Docket No. 99-25
Power Radio Service	)	FCC 05-75
	)	
	)	

SECOND ORDER ON RECONSIDERATION AND FURTHER NOTICE OF PROPOSED RULEMAKING

Supplemental Comments of Kyle E. Magrill

In the above captioned FCC proceeding, the Commission addresses a number of fundamental issues concerning the Low Power FM service (LPFM). Recent experience and discussions involving LPFM stations has suggested a need for an additional comment beyond the previously filed "Comments of Kyle E. Magrill". Although the topic of these supplemental comments are not within the scope of technical discussions put forth by the FCC in the above captioned NPRM, this commenter believes that minor technical changes that could improve the LPFM service should be considered under this proceeding.

Problem:
The limited coverage of LPFM stations has forced many operators to face a technical dilemma that forces them to choose between covering the maximum possible area vs. providing the best service within their coverage area. The question revolves around the decision to broadcast in stereo. Many LPFM stations choose monaural broadcasting because of the inherent noise improvement which results in the greatest coverage area. Those LPFM stations that choose to broadcast in stereo do so with the knowledge that their coverage area will be diminished but that service within the usable signal area will, generally, be better as a result of stereo sound. While this quandary has plagued FM broadcasters for decades, the already limited service area for LPFMs mean that many LPFM broadcasters that would prefer to broadcast in stereo must make the hard choice to remain mono in order to maximize their coverage area.

Solution:
While the technical limitations of traditional multiplex stereo broadcasting make it impossible to overcome the noise issues of receiving stereo transmissions in fringe signal areas, there is a solution that could offer a reasonable compromise. Currently Part 73.322(a)(2) requires the 19kHz stereo pilot to maintained at 8-10% injection. Empirical testing on approximately 25 receivers has shown that virtually all receivers decode stereo with a pilot injection of 6% and most receivers can reliably decode with pilot levels of 4.5% or less. By using a lower level of injection, receivers, in fringe areas where noise is becoming a problem, will drop to mono much earlier than a system using the 8-10% specified in 73.322(a)(2). This solution allows the LPFM broadcaster to deliver stereo content to areas covered by high signal levels and still preserve some of their fringe area audience by dropping to mono on many receivers as the noise increases.

Proposal:
If 73.322(a)(2) were amended to allow LPFM stations to broadcast with a stereo pilot injection of 4-10% instead of 8-10%, then many LPFM operators currently broadcasting in mono could choose to broadcast in stereo without sacrificing all of their fringe coverage. The stereo technical standards, which have been in place for over four decades, were designed to be rigid so that the consumer, who initially spent considerably more for a stereo receiver, would be assured that the receiver would perform properly on all stations transmitting stereo. This was necessary to foster the fledgling stereo technology. Today, stereo receivers are pervasive and as inexpensive as mono receivers. It is no longer necessary for the rules to remain rigid as the market is clearly saturated with low cost stereo receivers and has been for many years. Stereo decoder technology has also made huge strides since the inception of stereo broadcasting. Not only are decoders inexpensive, they work much better than their ancestors. As a result of new technology, they are typically much less particular about conforming to the precise technical standards that were adopted decades ago, making it possible to loosen the standards for LPFMs without negatively affecting any significant part of the listening public.

Two distinct groups of the listening public would potentially benefit from these changes. First, those that listen to mono LPFM stations that begin broadcasting in stereo, utilizing lower pilot injection, will benefit by receiving stereo broadcasts from stations that had only offered monaural broadcasts before. Second, LPFM stations, currently offering stereo service, may choose to reduce pilot injection thereby improving fringe area coverage and extending their service area to new listeners that were previously unserved.

Respectfully submitted,

Kyle E. Magrill